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**VIA ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW, Room TWB-204  
Washington, DC 20554

*Re: Second Joint Application of BellSouth for Provision of In-Region, InterLATA Services  
in Georgia and Louisiana, CC Docket No. 02-35.*

Dear Ms. Dortch:

AT&T Corp. ("AT&T") submits this letter in response to BellSouth's Supplemental Reply Comments and recent *ex partes*. The record in this proceeding establishes that BellSouth continues to fall substantially short of the requirements of Section 271 and the Commission's prior orders.

This *ex parte* focuses on two areas in which the problems revealed by the record are particularly severe. Part I addresses BellSouth's change control processes, which, as the record evidence (including the evaluation submitted by the Department of Justice) confirms, remains badly dysfunctional. Part II addresses issues of data integrity, focusing on the service order accuracy measurement that BellSouth recently and unilaterally revised. As is discussed in more detail below, and in the accompanying affidavit of Robert Bell, KPMG in the Florida metrics test has found that BellSouth has biased its service order accuracy results by manipulating and increasing its sample sizes whenever the data would otherwise show unacceptable performance.

**I. BELLSOUTH HAS NEITHER ESTABLISHED, NOR ADHERED TO, AN ADEQUATE CHANGE CONTROL PROCESS.**

The Commission has previously held that "in determining section 271 compliance, we review the adequacy of the change management plan *that is in place at the time the application is filed*. We further review whether the BOC has demonstrated a pattern of compliance with the plan." *Texas 271 Order* ¶ 117 (emphasis added). The record demonstrates, however, that the BellSouth change control process ("CCP") in effect at the time of its latest application is inadequate – and would be inadequate even with the modifications that BellSouth proposes to make in the process. Furthermore, BellSouth has not even complied with the inadequate CCP currently in effect.

To be effective, a change management process must be designed to implement changes according to their priority, in a timely manner, and with a minimum of defects, regardless of who

initiated the change. *See* Bradbury/Norris Supp. Decl. ¶ 153. BellSouth's CCP does not meet those criteria. Moreover, none of BellSouth's recently-made or proposed modifications to the CCP would fix the fundamental, core defects in the CCP that deny CLECs a meaningful opportunity to compete. These defects include BellSouth's exclusive veto power over change requests; BellSouth's exclusive control over the prioritization, implementation, and scheduling of change requests; the substantial backlog of change requests; and the inadequacy of the test environment that BellSouth provides to CLECs. Bradbury/Norris Supp. Decl. ¶¶ 147-175.<sup>1</sup>

The existing CCP plainly denies CLECs a meaningful opportunity to compete, because it gives BellSouth's total control over the prioritization and implementation of changes to its OSS. That control is demonstrated by AT&T's evidence – and BellSouth's own data – regarding the current backlog of change requests, and the limited number of CLEC-initiated change requests that BellSouth has actually implemented. BellSouth, for example, does not dispute the data that AT&T presented showing the substantial backlog of change requests. *Id.* ¶¶ 145-147 (showing that 93 change requests for features, and 33 defect change requests, had not been implemented as of February 20, 2002). Instead, BellSouth describes the backlog only as “the 40 Change Requests that are in ‘new’ or ‘pending clarification’ status” as of March 24, 2002, according to its own data. Stacy Supp. Reply Aff. ¶ 61. BellSouth's crabbed definition of “backlog” is unrealistic. BellSouth admits that its calculation of the backlog omits 55 change requests that have been scheduled but not implemented, 50 change requests that have not even been prioritized (“pending” requests), and 7 requests that have been prioritized, but have not been scheduled for implementation (“candidate requests”). *Id.*<sup>2</sup> When these change requests are included in BellSouth's calculation, the data show a backlog of 152 change requests as of March 24, 2002 – a volume larger than the backlog of 126 change requests that AT&T had calculated as of February. *Compare id. with* Bradbury/Norris Supp. Decl. ¶ 145.<sup>3</sup>

The few excuses that BellSouth offers for this backlog are without merit. For example, although it asserts that the majority of the 29 feature requests still classified as “new” were submitted before the 10-business-day deadline for acknowledgment went into effect in September 2001, BellSouth offers no explanation of why it *still* has not even validated these requests so long after their

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<sup>1</sup> The various modifications that BellSouth proposes or promises to make in the CCP are of no value in any event, since they are irrelevant to the issue of whether the CCP currently complies with Section 271. *Michigan 271 Order* ¶¶ 55, 179.

<sup>2</sup> BellSouth misleadingly suggests that 50 change requests are “awaiting prioritization by the CLECs” (and are thus “beyond BellSouth's control”) because CLECs have deliberately chosen not to prioritize any change requests since April 15, 2001. *See* BellSouth Supp. Reply Br. at 26-27; Stacy Supp. Reply Aff. ¶¶ 61, 70. The CLECs have not been able to prioritize change requests since last April because BellSouth has refused to provide CLECs with the release capacity information (including information regarding the capacity of future planned releases and the sizing of individual change requests), that they need in order to make any meaningful prioritization decisions. Although BellSouth agreed to provide to provide such sizing information in the “green-lined” version of the CCP that it submitted to the GPSC in February 2002, it still has not provided CLECs with information regarding the capacity of its releases. AT&T Supp. Reply Br. at 24 & n.32. In any event, BellSouth's description of the CLECs' prioritization decisions as “beyond [its] control” is disingenuous, since BellSouth alone makes the final prioritization decisions (and, in the case of the many areas that BellSouth regards as not subject to the CCP, such as legacy systems and billing, makes no provision even for CLECs to recommend prioritization of changes).

<sup>3</sup> Similarly, in its response to KPMG Exception 157 (which found “significant defects” in BellSouth's recent software releases), BellSouth admitted that its own March 5, 2002 analysis revealed a backlog of 38 system defects and 22 documentation requests. Stacy Reply Aff., Exh. WNS-12 at 5. BellSouth's figure was even higher than the backlog of 33 defect change requests as of February 20, 2002, that AT&T described in its evidence. Bradbury/Norris Supp. Decl. ¶ 147.

submission. Nor has BellSouth offered any reason why it failed to meet the 10-day deadline for requests filed since September 2001. Bradbury/Norris Decl. ¶ 145.<sup>4</sup> Similarly, BellSouth's claim that the CCP requires only its "best efforts" in correcting low-impact defect change requests ignores not only its long delays in implementing such requests, but the fact that Service Quality Measurements to which it has agreed set a 120-day deadline for such implementation (which BellSouth has not met).

BellSouth's own data also substantiate AT&T's evidence that BellSouth has implemented only a limited number of CLEC-initiated change requests. See Bradbury/Norris Supp. Decl. ¶ 148. Although it attempts to obfuscate the issue by asserting that it has implemented a total of 338 change requests of *all* types between June 1999 and March 24, 2002, BellSouth ultimately concedes that it has implemented only 75 prioritized feature change requests (37 "CLEC-initiated" change requests and 38 "BellSouth-initiated" change requests) during this 33-month period – an average of little more than two prioritized change requests per month. BellSouth Supp. Reply Br. at 26; Stacy Supp. Reply Aff. ¶ 64. Far from constituting "compelling evidence that the process is working" (BellSouth Supp. Reply Br. at 26), this record shows the total inadequacy of the existing CCP. Furthermore, despite its professed commitment to improve the CCP, BellSouth's own data show that its abysmal implementation record has continued. During the last 5 months, BellSouth has implemented only 10 prioritized change requests – a rate of implementation no better than in the past.<sup>5</sup>

BellSouth's data also demonstrate that most of the change requests that it has implemented are *defect* change requests – *i.e.*, change requests to repair defects in releases that it previously implemented. As previously indicated, of the 338 change requests that BellSouth claimed to have implemented as of March 24, 2002, only 75 are prioritized feature requests. With the exception of a small number of change requests for regulatory mandates and industry standards, all of the remaining 263 change requests were defect change requests. See BellSouth Supp. Br. at 26. Similarly, although BellSouth claims that it has implemented "more than 60 change requests" in the last three months, it fails to mention that 47 of these requests were defect change requests. Stacy Supp. Reply Aff. ¶ 17.<sup>6</sup>

The best evidence of the continuing problems in the CCP is found in BellSouth's own CCP Quarterly Tracking Report for the first quarter of 2002, which was issued on April 9, 2002. That report confirms that: (1) a substantial backlog of change requests exists, (2) BellSouth continues to implement CLEC-initiated change requests at a glacial pace; and (3) defect corrections comprise the

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<sup>4</sup> BellSouth's explanation for its delay in handling CR0127, which ITC DeltaCom submitted in August 2000 for implementation of a Pending Service Order ("PSO") indicator in the TAG interface, is similarly frivolous and misleading. See Stacy Supp. Reply Aff. ¶ 146. Although BellSouth suggests that this change request was submitted recently, it was actually submitted in August 2000. Bradbury/Norris Supp. Decl., Att. 38 at 4. BellSouth acknowledges that only recently did its "further investigation" reveal (contrary to the representations that it made to the Commission last November) that the PSO indicator was not available for CSRs obtained via TAG. However, BellSouth offers no explanation for its failure to take any action on ITC DeltaCom's request for at least twelve months before even determining whether the request was valid. Stacy Supp. Reply Aff. ¶ 146.

<sup>5</sup> Compare Stacy Supp. Reply Aff. ¶ 64 (stating that as of March 24, 2002, BellSouth had implemented a total of 37 "CLEC-initiated" and 38 "BellSouth-initiated" change requests) with Stacy Reply Aff. ¶ 63 (stating that BellSouth had implemented 32 "CLEC-initiated" change requests and 33 "BellSouth-initiated" change requests as of October 15, 2001).

<sup>6</sup> Although BellSouth claims that its "progress in implementing Change Requests is illustrated by the work completed in just the last three months" in implementing Releases 10.3, 10.3.1, and 10.4, at least four of those change requests (such as those involving the parsed CSR and the "single C order") were implemented due to regulatory orders. Furthermore, BellSouth erroneously treats its implementation of the parsed CSR and order tracking functionalities as four separate change requests, rather than two. See Stacy Supp. Reply Aff. ¶ 66-68; see also BellSouth Supp. Reply Br. at 27-28. And, of course, BellSouth fails to mention the 47 defect corrections that it made during the same period.

overwhelming majority of the change requests implemented by BellSouth. For example, the report shows a backlog of 96 feature change requests (Types 2, 3, 4, and 5) existed as of April 9. Even if the 19 feature change requests described as "new" are excluded, only 24 of the remaining 77 requests have been scheduled for implementation, and only 18 other requests have even been prioritized. *See* Attachment 1 hereto (BellSouth Current Log Summary in CCP Quarterly Tracking Report).<sup>7</sup> The report lists an additional 68 defect change requests (Type 6) that have not been implemented; of the 52 Type 6 requests that are not "new," only 42 have been scheduled for implementation. *Id.*

The Report also confirms that most of the change requests that BellSouth *has* implemented have been defect corrections. The Report states that as of April 9, BellSouth has implemented a total of 344 change requests since the inception of the change control process. Of those 344 implemented requests, 250 requests were Type 6, 38 requests were CLEC-initiated (Type 5), 38 requests were BellSouth-initiated (Type 4), and 18 requests were regulatory mandates (Type 2).<sup>8</sup> In short, defect change requests have accounted for more than 72 percent of the change requests implemented by BellSouth – in contrast to the 75 prioritized feature change requests, which represent less than 25 percent of the total (and which, on average, were implemented at a rate of only two per month during the 33-month period measured in BellSouth's report).<sup>9</sup>

In short, BellSouth's own Quarterly Tracking Report shows not only its failure to implement CLEC change requests in a timely manner, but also its persistent implementation of software with serious flaws. The latter problem is particularly harmful to CLECs, given BellSouth's additional failure to provide CLECs with a suitable test environment that would enable them to identify such defects before the scheduled implementation. AT&T Supp. Reply Br. at 26.

Finally, BellSouth's own data show that even when it agrees to implement a CLEC-initiated change request, BellSouth is slow to do so. BellSouth has acknowledged that the *average* interval from submission of a CLEC change request to its implementation was 164 days – almost three times that for a BellSouth-initiated change request. Bradbury/Norris Decl. ¶ 151 (noting that BellSouth's figures are, if anything, understated). Tellingly, although it claims to have made improvements in the CCP since last November, BellSouth does not claim that it has reduced this interval. In fact, some of the change requests that BellSouth implemented earlier this year (such as Change Requests 0369 and 0371) were submitted as long ago as 1999. *See* Stacy Supp. Reply Aff. ¶¶ 66-67; Bradbury/Norris Supp. Decl. ¶ 152 & Att. 40.

BellSouth's various proposals and promises to improve the CCP will not alter its continuing, exclusive control over the prioritization and implementation process. As AT&T and other parties have shown, for example, BellSouth's initial proposal to allocate 40 percent of annual release capacity to "CLEC change requests and/or CLEC regulatory driven mandates" represented no change from the

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<sup>7</sup> CLEC-initiated and BellSouth-initiated feature change requests account for all but 27 of these feature change requests, regardless of whether "new" requests are included. Of the remaining 27 change requests, 26 are Type 2 (regulatory) and 1 is Type 3 (industry standard), which are not subject to prioritization under the CCP.

<sup>8</sup> These figures were computed by combining two tables in the CCP Quarterly Report which are attached hereto as Attachment 1. BellSouth's Current Log Summary, which reflects any change requests implemented within the last 30 days; and BellSouth's Archive Log Summary, which reflects all change requests that have been implemented more than 30 days ago.

<sup>9</sup> BellSouth's current Change Control Release Schedule shows that 60 percent of the change requests scheduled for implementation in 2002 are defect change requests; only 25 percent of the scheduled requests are prioritized feature requests (either CLEC-initiated or BellSouth-initiated). Bradbury/Norris Supp. Decl. ¶ 161 & n.68.

*status quo*. AT&T Supp. Br. at 24 ; AT&T Supp Reply Br. at 22-23 & n.31. BellSouth's subsequent proposal to allocate to CLECs "at least 50 percent" of release capacity remaining after allocation of Types 2, 3, and 6 changes is at least as deficient as – and in some respects *worse* than – BellSouth's "40% Solution." Neither proposal takes into consideration the importance of the change being requested. *Id.* Furthermore, BellSouth's promise to implement the "CLECs' top 15 change requests" during 2002 not only remains unfulfilled, but also reflects its exclusive power to determine what change requests will be implemented, and when. AT&T Supp. Reply Br. at 23-24.<sup>10</sup> BellSouth has not even addressed, much less disputed, these deficiencies.

Faced with this evidence, BellSouth has instead suggested that: (1) the problems in the CCP described by the CLECs are, at least in part, a matter of the CLECs' own making; and (2) any deficiencies in the CCP can be resolved in current discussions between BellSouth and the CLECs or, to the extent that such discussions are unsuccessful, by the GPSC in its current review of the CCP. Neither of these arguments withstands scrutiny, and neither is calculated to address the inadequacies of the current CCP.

More specifically, the current discussions underway between BellSouth and the CLECs regarding the CCP also provide no basis for concluding that the core deficiencies in the CCP will be corrected in the near future. BellSouth and the CLECs met to discuss the "redline/greenline" document on March 28, 2002.<sup>11</sup> Another meeting was held on April 11, 2002. Although the discussions have been fruitful in some respects, no progress has been made in resolving the central deficiencies in the process, including BellSouth's exclusive control over prioritization, implementation, and scheduling of change requests.

It was clear from the outset of the March 28<sup>th</sup> meeting that BellSouth had not prepared any tools or suggestions in advance to facilitate discussions. Thus, the parties agreed to use a tracking tool matrix prepared by AT&T (based on the red-lined and green-lined versions) as the basis for discussions.<sup>12</sup> The parties discussed 17 of the 31 issues in the matrix prepared by AT&T, and reached resolution on at least 8 issues.

The issues that were *not* resolved at the March 28<sup>th</sup> meeting, however, are significant. For example, BellSouth continued to refuse to agree to the CLECs' proposal (in their red-lined version) that the scope of the CCP be clarified to include changes to gateways, changes to linkages between interfaces and its internal systems (including not only its linkage systems such as LEO and LESOG, but also manual work centers), and changes to billing systems. *See* Bradbury/Norris Decl., Att. 57 at 12-13.<sup>13</sup> BellSouth agreed only to investigate, and propose, language that it would accept regarding

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<sup>10</sup> BellSouth's proposal to implement the "top 15" CLEC change requests also does not address the issue of what additional CLEC-prioritized requests will be implemented (or when) during 2002, or thereafter. AT&T Supp. Br. at 26-27; Bradbury/Norris Decl. ¶ 166. Indeed, BellSouth does not even commit to a specific schedule for implementation of the "top 15" CLEC change requests during 2002, but merely asserts that eight of the requests are scheduled for implementation by the end of June. BellSouth Supp. Reply Br. at 18, 28. *See also* Stacy Supp. Reply Aff. ¶ 65 (stating only that BellSouth "has committed to implementing the 'top 15' CLEC prioritized Change Requests this year and is well on its way to meeting this commitment").

<sup>11</sup> BellSouth finally agreed to the March 28, 2002 meeting after rejecting AT&T's request for such a meeting two months earlier. *See* AT&T Supp. Br. at 24-25 n.26 & Bradbury/Norris Supp. Decl. ¶¶ 158-159.

<sup>12</sup> *See ex parte* letter from Kathleen B. Levitz (BellSouth) to William Caton, dated April 9, 2002 ("April 9 *ex parte*"), Att. A at 2 (minutes of March 28, 2002 meeting).

<sup>13</sup> *See* Bradbury Opening Decl. ¶¶ 201, 205; Bradbury/Norris Supp. Decl. ¶¶ 167-168. The CLECs' proposal is consistent with the Commission's holding that a BOC's obligation to provide nondiscriminatory access to its OSS extends

its legacy and billing systems. April 9 *ex parte*, Att. A at 4, 6. Furthermore, although BellSouth agreed to include the development of interfaces in the CCP, the issue of what “interfaces” BellSouth is willing to include has not been resolved. *Id.* at 4.

More fundamentally, the March 28<sup>th</sup> meeting did not resolve the issues of BellSouth’s control over prioritization, implementation, and scheduling of change requests. BellSouth, for example, rejected the CLECs’ proposal to include CLEC participation (through a “Designated CLEC Co-Moderator”) in BellSouth’s internal prioritization process, which makes the final determination of the prioritization and scheduling of change requests. *See* April 9 *ex parte*, Att. A at 6; Bradbury/Norris Supp. Decl. ¶ 165.

A second “redline/greenline meeting” was held by the parties on April 11, 2002. Like the March 28<sup>th</sup> meeting, the April 11<sup>th</sup> meeting resulted in progress on some issues. The parties reached agreement on most “administrative issues,” and resolved 11 of 50 substantive issues described in the updated tracking tool matrix.

The April 11<sup>th</sup> meeting, however, did not resolve the issues of prioritization, implementation, sequencing, and scheduling of change requests. In fact, the position that BellSouth took on these issues appeared to represent a retreat from that which it took at the March 28<sup>th</sup> meeting. As a replacement for its “50/50 Solution,” for example, BellSouth made a proposal that is *worse* than its predecessor. BellSouth proposed that:

- There be *separate* production releases for the CLECs and for BellSouth;
- The CLECs could prioritize both CLEC-initiated (Type 5) and BellSouth-initiated (Type 4) changes, and could elect to have Type 4 change requests implemented in “their” releases;
- BellSouth would follow the prioritization and scheduling determined by the CLECs to be implemented in the “CLEC releases,” but would have *sole* control over what changes are implemented – and when – in the “BellSouth releases”; and
- BellSouth would implement prioritized CLEC-initiated change requests within 60 weeks, subject to “capacity restraints.”

Although it does not contain the flawed percentage allocation approach embodied in its “40% Solution” and “50/50 Solution,” BellSouth’s latest proposal is deficient in other significant respects. For example, the proposal would arbitrarily divide releases by CLECs and by BellSouth and focus on the originator of the changes, rather than determine implementation of changes according to their need through simultaneous consideration of Type 4 and Type 5 changes by all parties. Bradbury/Norris Decl. ¶ 153. Moreover, under its proposal BellSouth would continue to exercise the same exclusive control over prioritization and implementation of its “Type 4” change requests that it has today (except to the extent that CLECs included Type 4 change requests in “their” releases). Finally, BellSouth’s proposal to implement prioritized Type 5 requests within 60 weeks “subject to capacity constraints” is

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not merely to interfaces, but also to “any electronic or manual processing link between that interface and the BOC’s internal operations support systems (including all necessary back office systems and personnel)” and all of the legacy systems that a BOC uses in providing UNEs or resale services to CLECs. *See Michigan 271 Order* ¶¶ 134-135. At the March 28<sup>th</sup> meeting, BellSouth reiterated its previous position that it would support inclusion of changes to billing systems within the scope of the CCP only to the extent that “certain ordering or pre-ordering requests to the CLEC interfaces may result in changes to the billing systems and testing” -- a limitation that ignores the fact that changes to BellSouth’s billing systems are important to CLECs, regardless of their cause. Bradbury/Norris Supp. Decl. ¶ 168.

meaningless, since it would leave BellSouth with the exclusive power to decide whether capacity is sufficient to permit implementation.

BellSouth's position on other issues at the April 11<sup>th</sup> meeting called into further question its willingness to correct fundamental deficiencies in the CCP. BellSouth had indicated at the March 28<sup>th</sup> meeting that it would propose new language regarding the inclusion of legacy systems and billing systems within the scope of the CCP. At the April 11<sup>th</sup> meeting, however, BellSouth proposed only language concerning billing – and that language made only a meaningless “commitment” to advise CLECs at quarterly Local Wholesale Billing Forums of billing changes that “may impact the CLECs.”<sup>14</sup> BellSouth also provided no indication that it is willing to reconsider its refusal to include linkages, legacy systems, and work centers within the scope of the CCP. Moreover, despite its professed commitment to provide information regarding the capacity of its releases to the CLECs, BellSouth still failed to provide such information at the April 11<sup>th</sup> meeting – and even stated that it did not know what the capacity of its releases would be for 2003.<sup>15</sup>

In short, the March 28<sup>th</sup> and April 11<sup>th</sup> meetings have achieved progress on some issues, but have not made any headway in resolving the most fundamental problems with the existing CCP. Furthermore, assuming that these problems remain unresolved in the meetings between the parties, it is uncertain whether, or when, that they will be fixed in the current Georgia PSC proceedings involving the CCP, notwithstanding BellSouth's assertion that those proceedings “will result in further process improvements.” BellSouth Supp. Reply Br. at 18. The Georgia PSC has set no schedule for resolution of CCP issues in its proceedings. Moreover, the Georgia PSC has already found – despite overwhelming evidence to the contrary in its own Section 271 proceedings and in the current Commission proceedings – that the current CCP is an “effective” process to which BellSouth “has adhered over time.” GPSC Comments filed March 5, 2002, at 25, 28.<sup>16</sup> Even the Department of Justice, however, cited the lack of BellSouth's compliance with the CCP – including BellSouth's recent failure to follow the CCP in implementing some of the “improvements” on which it relies in its latest Application – as one of the DOJ's principal concerns about the Application. *E.g.*, DOJ Eval. at 7-8, 13-14, 16.

For these reasons, BellSouth has failed to demonstrate that its change management process satisfies the requirements of Section 271. The existing CCP is demonstrably inadequate to afford

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<sup>14</sup> BellSouth's proposal is meaningless, because BellSouth alone would determine what changes in its billing systems “may” impact CLECs. Moreover, by providing that such changes would be announced only at quarterly billing forums, BellSouth's proposal creates the possibility that the CLECs would learn of such changes only *after* they had been implemented. BellSouth further sought to limit the applicability of the CCP to billing by proposing language that would require requests for changes to billing to be handled only through national industry forums that oversee billing standards – not through the CCP.

<sup>15</sup> Two representatives from BellSouth's Information Technology organization stated at the April 11<sup>th</sup> meeting that they had been advised by other BellSouth personnel that the capacity of the 2003 releases would be the same as that for 2002. If this information is correct, it is likely that the percentage of BellSouth's release capacity available for implementation of CLEC-prioritized requests in 2003 will be even smaller than in 2002, since industry standard LSOG-6 guidelines are scheduled for implementation during 2003.

<sup>16</sup> As BellSouth notes, the GPSC previously refused to consider changes to the CCP proposed by AT&T in its arbitration proceeding with BellSouth regarding the parties' interconnection agreement, ruling that disputes regarding the CCP should be resolved under the escalation and dispute resolution process in the CCP. *See* BellSouth Supp. Reply Br. at 21-22 n.16 (citing GPSC's April 20, 2001 order in GPSC Docket No. 11853-U).

CLECs a meaningful opportunity to compete, and the fundamental existing deficiencies in the CCP will not be fixed by BellSouth's recently-implemented or proposed modifications to that process.

Because of these serious problems, the Application should be denied. If the Commission nonetheless concludes otherwise, it should at least require BellSouth to make additional, substantial revisions in the CCP, including the following:

- First, BellSouth should be required to agree to a specific timetable for implementation of change requests, without attaching conditions to the timetable (such as "subject to capacity constraints"). Type 4 and Type 5 changes should be implemented no later than 60 weeks after prioritization. Only with the approval of the CLECs (or the state regulatory commission) should BellSouth be permitted to deviate from this timeline.
- Second, BellSouth should be required to implement a single prioritization process, in which BellSouth and the CLECs jointly make the final determination as to the prioritization and implementation of change requests. This process would replace the current process, under which BellSouth has a veto power over change requests, treats CLECs' prioritization of change requests as purely informational, and unilaterally makes the final determinations regarding prioritization and implementation in an internal process without CLEC involvement.
- Third, BellSouth should be required to provide complete and accurate information regarding the capacity of its releases, together with information regarding the timing of proposed releases on a rolling basis (for example, for twelve months). This information is critical to CLECs' long-term planning. Currently, BellSouth has agreed to provide capacity data only for its next scheduled release, and is unwilling to provide historical data or rolling information.
- Fourth, BellSouth should be required to commit to implementing the current backlog of change requests within a specific, reasonable timeframe. Although the above-described 60-week deadline will help to resolve the timing issues on a going-forward basis, BellSouth should be required to complete implementation of the entire backlog within a specific period. AT&T believes that an 18-month time limit should be imposed.
- Fifth, the CCP document should be revised to make clear that the CCP includes all of BellSouth's OSS used to provide services to CLECs. Thus, the CCP should be amended to specifically include within its scope all of BellSouth's legacy systems, linkage systems, billing systems, and work centers. To date, BellSouth has refused to agree to such inclusion (notwithstanding its recent acceptance of the CLECs' definition of "CLEC-affecting changes").
- Sixth, BellSouth should be required to design the CAVE testing environment to mirror the production environment. Thus, BellSouth should be required to allow CLECs to use their own codes (rather than BellSouth's codes) in the testing environment. In addition, BellSouth should be required to implement a "go/no go vote" process that would ensure that a scheduled change will go forward only with the CLECs' consent and that CLECs can stop a planned change that may cause



problems in the OSS, based on testing in CAVE or on a review of documentation when testing is unavailable.

*See also* Bradbury/Norris Decl. ¶ 194 (describing other revisions that are needed in the CCP). As long as BellSouth retains its power to make the final, exclusive determination as to what change requests will be implemented, and when – a power that BellSouth’s actual or proposed modifications to the CCP do not alter – the CCP will not afford CLECs a meaningful opportunity to compete.

## **II. BELLSOUTH’S DATA ARE NOT RELIABLE OR TRUSTWORTHY.**

There is no rational basis upon which the Commission can conclude that BellSouth’s performance data are “meaningful, accurate, and reproducible,” a fundamental showing in all prior approved applications. *Texas 271 Order* ¶ 428; *Kansas/Oklahoma 271 Order* ¶ 278. As AT&T has explained, BellSouth’s performance data are inherently unreliable because: (1) certain measurements on which BellSouth relies do not accurately capture performance; (2) BellSouth has unilaterally altered performance measures in ways that can skew its actual performance; (3) BellSouth has inappropriately excluded data from its performance results; and (4) BellSouth’s performance reports have been plagued with errors, internal inconsistencies and discrepancies.<sup>17</sup> Indeed, BellSouth’s unilateral changes to its service order accuracy measurement, coupled with a recently-opened observation by KPMG during the Florida metrics audit, underscore that neither BellSouth, nor its data, can be trusted.<sup>18</sup>

Before BellSouth withdrew its initial application, BellSouth’s own commercial performance data, as well as KPMG’s testing results in Georgia and AT&T’s real world experience, confirmed that BellSouth’s performance in the area of service order accuracy was abysmal.<sup>19</sup> These errors unquestionably cause customer dissatisfaction and effectively preclude CLECs from realizing the expected efficiencies flowing from their significant investments in electronic systems. *See* AT&T at 23-24.

After BellSouth withdrew its Application, BellSouth revealed that it had changed its methodology for calculating its service order accuracy results. Critically, when BellSouth refiled its Application, BellSouth not only claimed that its service order accuracy rates had dramatically

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<sup>17</sup> Bursh/Norris Supp. Decl. ¶¶ 4-102; Bursh/Norris Supp. Reply Decl. ¶¶ 6-37. The lengths to which BellSouth goes to rationalize the deficiencies in its performance data are nothing short of remarkable. Thus, for example, AT&T has explained that BellSouth’s completion notice interval data are inaccurate and incomplete because BellSouth excludes orders when the orders are completed in one month, but the completion notice is issued in another. Noting that AT&T’s arguments are meritless, BellSouth contends that it does not “exclude” such orders, but rather chooses not to count such orders when the completion notices are sent after BellSouth’s processing window closes. Varner Supp. Reply Aff. ¶ 78. BellSouth’s argument is circular. The purpose of a performance measurement plan is to capture accurately the actual performance it is intended to measure. BellSouth’s completion notice interval measure cannot serve its intended purpose because BellSouth omits data from its performance results. Ironically, BellSouth has admitted in the Florida workshop that these orders should be included in its performance results and has agreed to start capturing these orders in May. Varner Florida PSC Workshop Handout at 20. In all events, the data on which BellSouth currently relies to support its Application are inaccurate and incomplete.

<sup>18</sup> BellSouth also has failed to provide the raw data to which CLECs are entitled which are necessary to verify the accuracy of BellSouth’s results. *See* Bursh/Norris Supp. Reply Decl. ¶ 31.

<sup>19</sup> *See, e.g.*, DOJ Initial Eval. at 22 n.51 (noting that “BellSouth missed by a wide margin almost all of the order accuracy performance standards for UNEs in June and July in both Georgia and Louisiana). *See also* Norris Decl. ¶ 35; Bradbury Decl. ¶ 115-123.

improved, but also asserted that its new and improved methodology assures greater precision in reported results. However, in view of the timing and the circumstances under which these changes were made, BellSouth's claims of "improved" performance and increased accuracy in performance reporting ring hollow. Bradbury/Norris Supp. Decl. ¶ 123; Bursh/Norris Supp. Reply Decl. ¶ 16. The mere fact that BellSouth's purported improved service order accuracy rates happened to coincide with BellSouth's changes to its methodology is highly suspicious. Bursh/Norris Supp. Decl. ¶ 105. Indeed, the reality is that BellSouth's actual performance did not improve, it simply changed its methodology. Bradbury/Norris Supp. Decl. ¶ 116; DOJ Eval. at 13 n. 57; Bursh/Norris Supp. Reply Decl. ¶ 16. Furthermore, BellSouth's changes to the service order accuracy measure, which were made "without prior approval of the Georgia PSC or notice to the CLECs" (DOJ Eval. at 13), make a mockery of the performance monitoring and reporting process and are consistent with BellSouth's general practice of unilaterally modifying performance measures whenever it suits its purposes.

To make matters worse, BellSouth's revised methodology – which BellSouth claims assures greater accuracy in performance results – suffers from fundamental infirmities that can obscure or skew BellSouth's actual performance. In this regard, because BellSouth now examines only a sample of service orders, instead of all service orders associated with the LSR, BellSouth can report perfect performance even when the associated service orders which have been excluded from the sampling frame are riddled with errors. Bursh/Norris Supp. Decl. ¶¶ 105, 112-113. Accordingly, BellSouth's methodology is flatly inconsistent with the SQM business rules which state that an order is deemed to be completed without error when "*all service attributes and account detail changes* (as determined by comparing the original order) *completely and accurately* reflect the activity specified on the original and any supplemental CLEC order." SQM at 3-34 (emphasis added).

Similarly, BellSouth's inclusion of fully-mechanized orders when calculating service order accuracy necessarily overstates BellSouth's actual performance. Bursh/Norris Supp. Reply Decl. ¶ 16; Birch Reply at 5-10. In addition, because BellSouth has changed the service order accuracy measure from a State-specific to a regional measure, it can effectively conceal subpar performance in Georgia.<sup>20</sup> Bell Second Supp. Reply Decl. ¶ 5. Furthermore, although BellSouth contends that its revised methodology is designed to assure that statistically valid samples are used to calculate performance results, as the accompanying declaration of Robert M. Bell shows (attached as Attachment 3), BellSouth's samples do not and cannot have the intended level of statistical precision because, *inter alia*, the very formula that BellSouth touts as evidence of the validity of its sampling approach is erroneous. Bell Second Supp. Reply Decl. ¶¶ 6-16.

Most disturbingly, KPMG recently opened an observation during the Florida metrics test, finding that BellSouth's service order accuracy results are biased in BellSouth's favor because BellSouth manipulates and increases its sample sizes whenever "the results have higher variances than

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<sup>20</sup> The flow-through data reported by BellSouth illustrate that regionwide data can conceal substantial variations in BellSouth's performance from State to State. Although BellSouth has reported flow-through data only on a regionwide basis in its MSS reports, it was recently ordered in Section 271 proceedings in Tennessee to provide such data on a State-specific basis in response to AT&T discovery requests. BellSouth's State-specific data show considerable differences in flow-through performance among the nine States in its region. For example, Attachment 2 hereto sets forth the difference between the highest and lowest Achieved Flow-Through rate experienced by any State in the BellSouth region by month (March to December 2001) and by product category (residential resale, business resale, UNEs, aggregate of non-LNP products, and LNP). As shown in Attachment 2, the ranges are significant for each product type. Thus, one cannot assume that BellSouth's performance in a particular State reflects that which it reports on a regionwide basis.

allowed by the benchmark standards.”<sup>21</sup> Thus, as KPMG’s observation shows and as the accompanying declaration of Dr. Bell further explains, BellSouth’s touted sampling methodology is a mere contrivance that permits BellSouth to game the process, increase the sample size, and obtain more favorable service order accuracy results whenever the observed error rate in the drawn sample is higher than expected. Bell Second Supp. Decl. ¶¶ 17-23.

Additionally, the metrics audit in Georgia (as well as Florida) is far from complete. In this regard, BellSouth’s assertion that KPMG’s February Interim Status Report confirms that data integrity testing in Georgia is 54% complete is misleading. Varner Supp. Reply Aff. ¶ 27 n. 1. KPMG’s February Interim Status Report does not state precisely what percentage of data integrity testing has been completed. Notably, after KPMG issued its February Interim Status report, KPMG revealed that it has completed only 10% of the evaluation necessary for the data integrity phase of testing. In view of the significant data integrity issues that have been uncovered in Florida, as well as the considerable testing that must be completed in Georgia, it remains to be seen whether other significant data integrity problems will be discovered during the metrics audit. Bursh/Norris Supp. Reply Decl. ¶ 35; DOJ Eval. at 20.

The failure of BellSouth to provide reliable data on service order accuracy is particularly significant in view of its excessive reliance on manual processing. See AT&T Supp. Br. at 17-19; Bradbury/Norris Supp. Decl. ¶¶ 95-118. Notwithstanding its assertion that the “‘hard facts’ ruin” the data presented by AT&T regarding manual fall-out due to BellSouth system design or system error (Stacy Supp. Reply Aff. ¶ 184), BellSouth does not dispute AT&T’s evidence that: (1) the rate of BellSouth-caused manual fall-out showed no improvement during 2001 (when the rate for December 2001, as in January 2001, was 21 percent); (2) even the flow-through rates that BellSouth selectively cited in its Application showed no, or little, improvement during 2001; and (3) the volumes of orders manually processed by BellSouth significantly increased during 2001. AT&T Supp. Br. at 17-18 & Bradbury/Norris Supp. Decl., Att. 15. In fact, BellSouth concedes that the flow-through rates on which it relies increased by only one percentage point in 2001 (and “may seem to reflect minor progress”). Stacy Supp. Reply Aff. ¶ 183.<sup>22</sup> BellSouth further concedes that the combined BellSouth-caused manual fall-out rate in January 2002 was still 19.4 percent – little different from the 21.1 percent rate it reports for January 2001. *Id.* ¶ 185.<sup>23</sup>

If, as BellSouth contends, the total volume of LSRs submitted by CLECs has “sky-rocketed” during the last year (*id.* ¶ 183), those volumes – and the corresponding manual processing workload of BellSouth’s Local Carrier Service Center (“LCSC”) – will increase even more substantially as CLECs

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<sup>21</sup> KPMG Florida Observation 178, dated April 1, 2002.

<sup>22</sup> As in the past, BellSouth cites only the “CLEC Error Excluded Rates” that it includes in its performance reports – rather than the “Achieved Flow-Through Rate,” which is the more reliable measure of flow-through because it considers only those manually processed orders that fall out either due to BellSouth system design or BellSouth system error. See Bradbury/Norris Supp. Decl. ¶ 101. Like the CLEC Error Excluded Rates, BellSouth’s Achieved Flow-Through Rates for January 2002 showed little, or no, improvement over 2001. For example, the aggregate Achieved Flow-Through Rate in January 2002 was 78.28 percent. Although this rate was an improvement over that for December 2001, it still is below the 79.54 percent rate for January 2001. For resale residential orders, the January 2002 Achieved Flow-Through rate of 80.82 percent is below that for December 2001 (81.62 percent) and for January 2001 (85.70 percent). See *id.*; *ex parte* letter from Kathleen B. Levitz (BellSouth) to Magalie Roman Salas, dated March 1, 2002, Attachment at 45.

<sup>23</sup> Although BellSouth asserts that the January 2002 rate of BellSouth-caused manual fall-out represents an improvement over that for January 2001 (Stacy Supp. Reply Aff. ¶ 185), it ignores the fact that the January 2002 rate is still higher than that for April and May 2001. See Bradbury/Norris Supp. Decl., Att. 15.

ramp up for mass-market entry. As a result, the likelihood of errors by LCSC representatives in manually re-keying such orders will increase exponentially. See AT&T Supp. Br. at 18-19. Only if BellSouth shows that it can produce reliable data on service order accuracy can its performance be properly measured – but BellSouth has yet to do so.<sup>24</sup>

Against this backdrop, BellSouth cannot legitimately contend that its performance data are accurate and reliable. As this Commission has emphasized, the “reliability of reported data is critical” to Section 271 analysis. *Texas 271 Order* ¶ 428. On the basis of this record, BellSouth has not met its burden of demonstrating that its performance data are accurate and trustworthy, and that its data show that it has met its Section 271 obligations.

Sincerely,

A handwritten signature in black ink, appearing to be 'JM' followed by a horizontal line.

Joan Marsh

cc: Renee Crittendon  
Susan Pie  
James Davis-Smith

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<sup>24</sup> In a recent *ex parte* responding to evidence presented in AT&T's reply comments, BellSouth contended that the identification of 4,581 BellSouth-caused errors as Error Code 9685 (“Due Date Could Not Be Calculated”) on its Flow Through Error Analysis Report for February 2002 does not indicate a problem with its due date calculator. See AT&T Supp. Reply Br. at 8 & Att. 3 at 4; *ex parte* letter from Glenn T. Reynolds (BellSouth) to William Caton, dated April 12, 2002 (“April 12 *ex parte*”), at 3-4. BellSouth's argument, however, is based on the erroneous premise that these “BST-caused” errors encompass LSRs designed to fall out for manual processing. *Id.* at 4. In reality, these errors only encompass LSRs that fall out due to errors in BellSouth's systems.

# **ATTACHMENT 1**

# CURRENT LOG SUMMARY

CR TYPE SUMMARIES AS 4/9/2002

## Type 2 Status

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Pending	13
Scheduled	8
Candidate Request	5
Implemented	3
Pending Clarification	2
Cancelled	2
<hr/>	
<b>TOTAL</b>	<b>33</b>

## Type 3 Status

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Pending	1
<hr/>	
<b>TOTAL</b>	<b>1</b>

## Type 4 Status

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Candidate Request	6
Scheduled	5
Pending	5
Cancelled	5
New	2
Implemented	1
<hr/>	
<b>TOTAL</b>	<b>24</b>

## Type 5 Status

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New	17
Pending	16
Scheduled	11
Cancelled	9
Candidate Request	7
Implemented	3
<hr/>	
<b>TOTAL</b>	<b>63</b>

## Type 6 Status

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Scheduled	42
Implemented	22
New	16
Validated Defect	8
Pending Clarification	3
Workaround Identified	2
<hr/>	
<b>TOTAL</b>	<b>93</b>

# ARCHIVE LOG SUMMARY

CR TYPE SUMMARIES AS

4/10/2002

## Type 2 Status

Implemented	15
Cancelled	1
<hr/>	
TOTAL	16

## Type 3 Status

Cancelled	2
<hr/>	
TOTAL	2

## Type 4 Status

Implemented	37
Cancelled	37
<hr/>	
TOTAL	74

## Type 5 Status

Cancelled	65
Implemented	35
<hr/>	
TOTAL	100

## Type 6 Status

Implemented	228
Cancelled	92
<hr/>	
TOTAL	320

## **ATTACHMENT 2**



**Achieved Flow Through Rates  
Range of Variance  
(High State Rate minus Low State Rate)**

<b>Month (2001)</b>	<b>Residential Resale</b>	<b>Business Resale</b>	<b>UNE</b>	<b>Aggregate Non-LNP</b>	<b>LNP</b>
March	12.43%	16.36%	16.37%	12.12%	68.00%
April	11.05%	33.03%	20.72%	11.61%	74.00%
May	10.11%	11.80%	15.38%	10.49%	69.00%
June	14.00%	16.53%	22.23%	14.50%	78.00%
July	16.66%	27.80%	16.26%	14.03%	69.00%
August	12.93%	14.43%	30.33%	19.43%	83.00%
September	8.40%	23.25%	16.63%	13.31%	82.00%
October	9.96%	12.96%	17.63%	12.05%	80.00%
November	11.30%	24.77%	28.00%	10.48%	80.00%
December	11.56%	20.71%	30.46%	8.88%	75.00%
<b>Avg. Range</b>	<b>11.84%</b>	<b>20.16%</b>	<b>21.40%</b>	<b>12.69%</b>	<b>75.80%</b>

# **ATTACHMENT 3**

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Application of BellSouth Corporation,	)	
Pursuant to Section 271 of the	)	
Telecommunications Act of 1996	)	CC Docket No. 02-35
To Provide In-Region, InterLATA Services	)	
In Georgia and Louisiana	)	

**SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL  
ON BEHALF OF AT&T CORP.**

April 19, 2002

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Application of BellSouth Corporation,	)	
Pursuant to Section 271 of the	)	
Telecommunications Act of 1996	)	CC Docket No. 02-35
To Provide In-Region, InterLATA Services	)	
In Georgia and Louisiana	)	

**SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL  
ON BEHALF OF AT&T CORP.**

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**I. INTRODUCTION AND QUALIFICATIONS**

1. My name is Robert M. Bell. I am currently employed as a Principal Member of Technical Staff of the Statistics Research Department at AT&T Labs-Research.
2. As part of AT&T's opening comments in CC Docket No. 01-277, I filed with the Commission an initial declaration ("Bell Decl."). On March 4, 2002, I filed with the Commission a Supplemental Declaration ("Bell Supp. Decl."). On March 28, 2002, I filed with the Commission a Supplemental Reply Declaration ("Bell Supp. Reply Decl.").

**II. PURPOSE OF POST SUMMARY DECLARATION**

3. The purpose of this Second Supplemental Reply Declaration is to address certain statistical issues raised in the Supplemental Reply Affidavit of Keith E. Johnson, Ph.D. ("Johnson Supp. Reply Aff.") regarding BellSouth's revised methodology for calculating its Service Order Accuracy ("SOA") results. As AT&T has explained, because of BellSouth's unilateral changes to its service order accuracy measure, BellSouth's service order accuracy results are highly suspect. In this regard, because BellSouth has changed the service order

accuracy measure from a state-specific to a regional measure, BellSouth can conceal subpar performance in Georgia. Similarly, BellSouth's small sample sizes raise concerns regarding the validity of BellSouth's disaggregated results. *See* Bell Supp. Decl. ¶¶ 6-7. Furthermore, BellSouth's inclusion of fully-mechanized orders when calculating its service order accuracy results distorts its actual performance. *See* Bursh/Norris Supp. Reply Decl. ¶ 16.

4. In his Supplemental Reply Affidavit, Dr. Johnson insists that BellSouth's new methodology assures greater accuracy in performance results and contends that AT&T's arguments regarding the defects in BellSouth's new methodology are meritless. However, BellSouth's arguments cannot withstand analysis. Moreover, an observation that KPMG recently opened during the Florida third party test confirms that BellSouth's service order accuracy results are biased.

### **III. DEFECTS IN BELL SOUTH'S NEW SERVICE ORDER ACCURACY METHODOLOGY**

5. AT&T has previously explained that BellSouth's unilateral decision to change the service order accuracy measure from a Georgia-specific to a regional measure could mask subpar performance in Georgia. *See* Bell Supp. Decl. ¶¶ 5-6. BellSouth contends that "there is no reason to believe that SOs for one state would yield a significantly different result than SOs from any other state or for the entire region." Johnson Supp. Reply Affidavit ¶ 11. However, BellSouth provides no empirical data to support this assertion. In fact, the data BellSouth has filed previously belie BellSouth's contention and show that BellSouth's performance results in Georgia were worse than those for the entire region during certain time periods. *See* Supp. Bell Decl. ¶ 5; Stacy, Varner and Ainsworth Reply Aff. ¶ 49. If BellSouth's true error rates in Georgia are substantially different from regional results, then BellSouth's

SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL

regional service order accuracy results are misleading and will conceal BellSouth's actual performance in Georgia.

6. BellSouth also contends that AT&T's concerns about BellSouth's small sample sizes in calculating results under its new methodology are without merit. Johnson Supp. Reply. Aff. ¶ 8. As support for this proposition, BellSouth, pointing to certain calculations, contends that "a sample of 35 would be slightly more likely to overstate the error rate than to understate it," and that "a sample twice as large (70) would be more likely to understate the error rate for the universe." *Id.* However, BellSouth's calculations are nothing more than a red herring. The counterintuitive results are artifacts of the specific sample sizes carefully selected for the example. Either sample size is unbiased if the sample size is selected in advance.<sup>1</sup> Moreover, the example that BellSouth uses avoids the real issue, which is uncertainty, not bias. Small sample sizes lead to increased sampling error and, therefore, a greater risk that poor performance will go undetected.

7. BellSouth further contends that its revised sampling methodology will assure accuracy in its performance results. *See, id.* ¶ 17. In an effort to bolster this allegation, BellSouth, in the Supplemental Reply Affidavit of Dr. Johnson, explains that the following process is used to select the samples of service orders used to calculate performance results (*id.* ¶ 5):

An unordered sample of 150% of the prescribed size is generated from SO records using computer generated random numbers. That is, the first SO on the list is the first one randomly selected, the second SO on the list is the second one randomly selected, etc. The reviewers begin with the first SO on the list and attempt to retrieve it for analysis. Should it be unavailable they proceed to the next

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<sup>1</sup> But see Paragraphs 17-23 below (explaining that BellSouth's procedures for setting sample sizes lead to biased estimates).

SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL

designated SO and continue until they have been able to locate, in order, the prescribed number of SOs for the sample. By maintaining the list in the order in which they were selected the randomness of the selections is insured.

8. BellSouth offers no explanation as to why it is unable to retrieve certain service orders for analysis. If the excluded service orders are more error prone, the observed error rate in the sampled population would be biased and lower than the true error rate in the complete population. Of course, the extent of the bias would depend on the proportion of service orders that are missing. Although BellSouth has not provided any data quantifying the proportion of service orders that are unavailable for review, the mere fact that BellSouth must generate a list of service orders that is 150% of the desired sample size suggests that the proportion of missing service orders could approach, but not exceed, one-third.

9. BellSouth argues that its new methodology is designed to assure that statistically valid samples are used to calculate service order accuracy results. In attempting to buttress this allegation, BellSouth states that it uses the hypergeometric distribution to compute confidence limits for proportions that are estimated using samples from finite populations. Johnson Supp. Reply Aff. ¶ 4. BellSouth asserts further that it uses "error rates slightly greater than the historical tendency [which] helps assure that the final result will be statistically valid at this level." *Id.* Additionally, BellSouth claims that these confidence limits are used to determine sample size requirements. Notably, BellSouth does not quantify the extent to which it uses error rates that are "slightly greater than the historical tendency." More fundamentally, as demonstrated in more detail below, BellSouth's analysis is flawed in other important respects.

10. Exhibit KEJ-1 which is attached to Dr. Johnson's Supplemental Reply Affidavit shows the formulas that BellSouth uses to compute the upper and lower confidence

**SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL**

limits. However, the formulas in this exhibit are wrong. The correct formulas for exact confidence limits are set forth in Buonaccorsi, J.P., "A Note on Confidence Intervals for Proportions in Finite Populations," *American Statistician*, August 1987, Vol. 41, pp. 215-218. Changing  $X$ ,  $x$ ,  $L(x)$ , and  $U(x)$  in Buonaccorsi's notation to  $D$ ,  $d$ ,  $d_L$ , and  $d_u$ , respectively, makes the notation consistent with Dr. Johnson's. With the revised notation and  $\alpha = 0.05$ , Buonaccorsi's equation (2.4) is:

$$d_u = \text{largest } A \text{ such that } \Pr_A[D \leq d] > 0.025,$$

where  $\Pr_A[D \leq d]$  equals the probability of finding  $d$  or fewer defects in the sample if there are  $A$  defects in the universe.

11. Dr. Johnson's formula is equivalent to the formula:

$$d_u = \text{largest } A \text{ such that } \Pr_A[D = d] \geq 0.025.$$

The major difference between Dr. Johnson's formula and Buonaccorsi's equation is that Dr. Johnson incorrectly uses the probability of the event  $D = d$  instead of the event  $D \leq d$ .<sup>2</sup>

12. The following example illustrates the impact of Dr. Johnson's errors.

Assume that the number of service orders be  $N = 1000$ . Consider a sample size of  $n = 100$ , with  $d = 4$  defects. Based on the table in paragraph 13 of Dr. Johnson's supplemental reply affidavit, the upper confidence limit for the overall defect rate should be no higher than 9.0%.

13. To determine the upper confidence limit, we must compute the probability distribution for the number of defects in the sample under the assumption that 9.0% of the population is in error—*i.e.* that there are  $A = 90$  defects in the population of 1000 orders. I used

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<sup>2</sup> The formulas also differ in that Johnson uses " $\geq 0.025$ " rather than " $> 0.025$ " in the inequality. That difference is inconsequential because it is very unlikely that  $\Pr_A[D \leq d]$  will equal 0.025.



the hypergeometric formula<sup>3</sup> to compute the lower tail of that distribution for values of  $A = 89, 90, \dots, 97$ . The table below shows hypergeometric probability values for  $d = 0$  to 4 defects in the sample.

# of Defects in Population	Probability of Exactly $d$ Defects in Sample					$\Pr_A[D \leq d]$
	$d = 0$	$d = 1$	$d = 2$	$d = 3$	$d = 4$	
$A = 89$	0.0001	0.0006	0.0031	0.0109	0.0279	0.0426
$A = 90$	0.0000	0.0005	0.0029	0.0101	<b>0.0261</b>	0.0396
$A = 91$	0.0000	0.0005	0.0026	0.0093	0.0245	0.0369
$A = 92$	0.0000	0.0004	0.0024	0.0086	0.0229	0.0343
$A = 93$	0.0000	0.0004	0.0022	0.0079	0.0214	0.0319
$A = 94$	0.0000	0.0003	0.0020	0.0073	0.0200	0.0296
$A = 95$	0.0000	0.0003	0.0018	0.0068	0.0186	0.0275
$A = 96$	0.0000	0.0003	0.0016	0.0062	0.0174	<b>0.0255</b>
$A = 97$	0.0000	0.0003	0.0015	0.0057	0.0162	0.0237

14. According to the procedure in Exhibit KEJ-1, we should look in the column labeled  $d = 4$  for the last row such that the tabled probability exceeds 0.025. That occurs for the value 0.0261 (in bold), in the row labeled  $A = 90$ . Consequently, Dr. Johnson's procedure yields an upper confidence limit of 90 for the number of defects in the universe, or equivalently an upper confidence bound of 9.0% for the defect rate.

15. To determine the correct upper confidence limit, we must look instead at the last column of the table, which shows the cumulative probability of observing 4 or fewer defects in a sample of size 90. Because this cumulative probability exceeds 0.025 through the row with  $A = 96$ , the correct confidence interval extends to 9.6%—a substantially higher value than that computed by Dr. Johnson's formula.

<sup>3</sup> The formula is the one shown in KEJ-1 with  $A$  substituted for  $d_u$ ; that is,

$$\Pr_A[D = d] = \frac{C(A, d)C(N - A, n - d)}{C(N, n)}$$

16. A similar correction is required for Dr. Johnson's lower confidence limit, resulting in values that are lower than he would compute. Consequently, the sample sizes selected by BellSouth do not produce the degree of certainty that they were intended to achieve.

17. A recently opened observation in the Florida test also confirms that BellSouth's methodology for calculating SOA results produces biased results in BellSouth's favor. In Observation 178, KPMG reports that, "BellSouth adjusts the sample size when the results have higher variance than allowed by the benchmark standards, as stated by the SQM definition. Since the variance increases with the BellSouth error rate, this results in the selection and evaluation of more service orders only when BellSouth is doing poorly." KPMG Florida Observation 178, dated April 1, 2002 (attached hereto as Exhibit 1). KPMG concludes that because "[t]his method has the potential for producing biased samples for calculating the 'Provisioning: Service Order Accuracy' SQM, the reported values would not accurately reflect the quality of service provided." *Id.*

18. In its response to Observation 178, BellSouth does not deny that it adjusts sample sizes when its results are poor, but instead contends that doing so does not bias results. BellSouth states that "[i]f additional sampling of the current month is undertaken, it offers no advantage to BellSouth other than to increase the certainty of the measure." BellSouth's Response to Observation 178, dated April 3, 2002 at 2 (attached hereto as Exhibit 2). BellSouth's contention is simply wrong as the following example illustrates.

19. Assume that the final exam for a course consists of tasks that the students try to perform. The instructor writes two exams of equal difficulty, each consisting of five tasks. The score on either exam is the percentage of tasks completed successfully. Assume further that the instructor offers each student two options: (1) the student may take one exam (chosen at

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random) in the morning, or (2) the student may take one exam in the morning, one in the afternoon, and average the two scores. The student must decide before seeing the morning exam.

20. Assume that Mary is equally likely to score 60, 80, or 100 on either of the two exams. Her score distribution is shown in Figure 1. Obviously, her expected (average) score is 80 for either exam. Also, assume that if she takes both exams, her score on the second exam is independent of her score on the first exam. In that case, Mary's score distribution (the average of the two exams) is shown in Figure 2. From the symmetry of Figure 2, it is clear that her expected score on both tests combined is also 80. If Mary chooses to take both exams, she reduces the probability of scoring 60, but she also reduces the chance of scoring 100. Since she has the same expected score under either scenario, her decision is likely to depend on how risk averse she is.

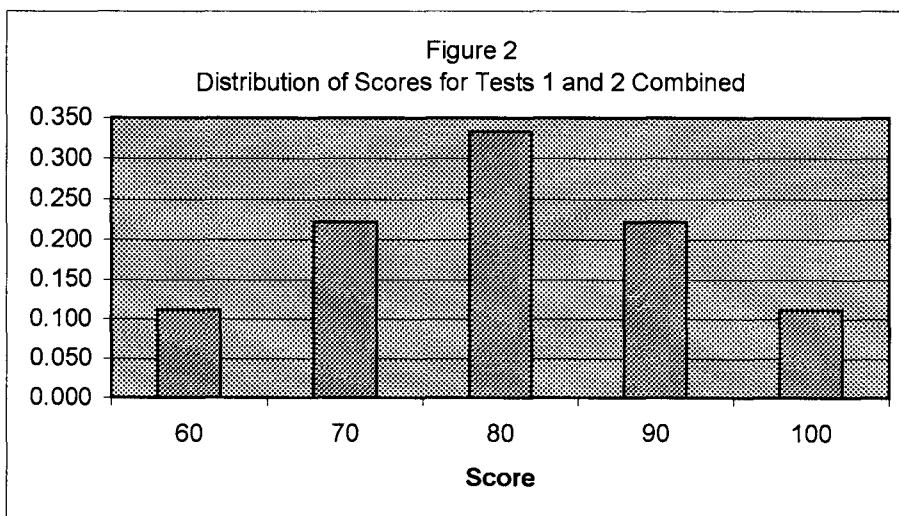
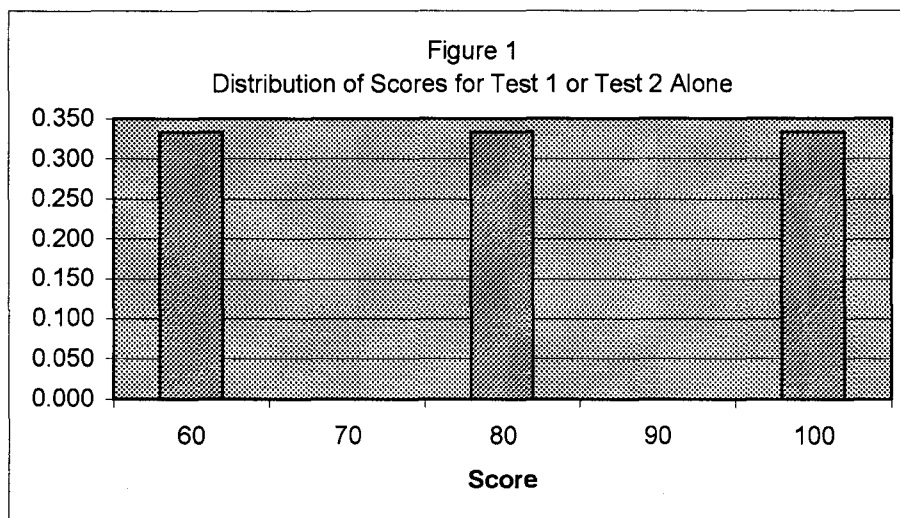
21. Assume, instead, that Mary is allowed to decide whether to take the afternoon exam *after* seeing her score from the morning. If she scores 100 in the morning, Mary will obviously take the afternoon off because she can only lose by taking the second exam. If she scores just 60, she will take the second exam, realizing that she probably has more to gain than to lose. If she scores 80, taking the second exam is equally likely to help or hurt her. For simplicity, assume that she would not take the second exam.

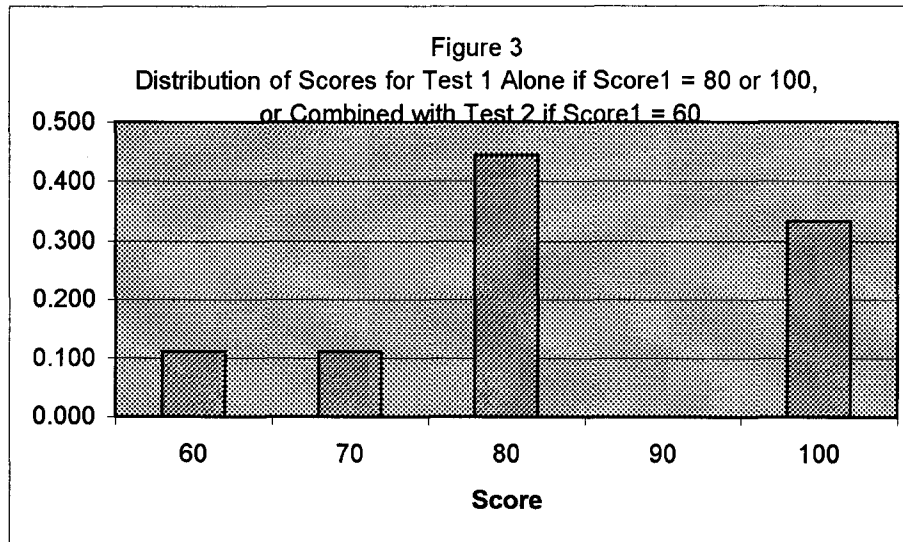
22. Figure 3 shows the distribution of Mary's scores if she takes the second exam only after scoring 60 in the morning. Her expected score in this case equals 83.33 points. Setting aside whether this procedure is a fair way to grade the course, it is clear that it produces biased estimates for the students' true abilities.

23. BellSouth's procedure for sampling service orders works in the same way. BellSouth's methodology allows BellSouth to keep good results from the initial sample and to "average in a make-up" when the initial results are poor. KPMG is correct that the BellSouth

**SECOND SUPPLEMENTAL REPLY DECLARATION OF ROBERT M. BELL**

sampling procedure is biased in favor of BellSouth. Because BellSouth's samples are biased for individual product classifications, BellSouth's claim that this problem cannot bias the overall error rate is obviously incorrect.





I declare under penalty of perjury that the foregoing is true and accurate to the best of my knowledge and belief.

A handwritten signature in cursive script, reading "Robert M. Bell", positioned above a horizontal line.

Robert M. Bell

Executed on April 19, 2002

# **EXHIBIT 1**

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Date: April 01, 2002

## **OBSERVATION REPORT**

An observation has been identified as a result of the Metrics Definitions and Standards Development and Documentation Verification and Validation Review. (PMR2)

### **Observation:**

**KPMG Consulting has found that BellSouth's method of sampling records used for the calculation of the "Provisioning: Service Order Accuracy" Service Quality Measurement (SQM) may produce biased estimates.**

### **Background:**

As part of the BellSouth-Florida OSS Evaluation, KPMG Consulting has reviewed the *Florida Interim Performance Metrics* document.<sup>1</sup> KPMG Consulting evaluates the accuracy, completeness, and consistency of each metric's stated definition, calculation and business rules.

### **Issue:**

BellSouth adjusts the sample size when the results have higher variance than allowed by the benchmark standards, as stated by the SQM definition. Since the variance increases with the BellSouth error rate, this results in the selection and evaluation of more service orders only when BellSouth is doing poorly.<sup>2</sup> In effect, this procedure gives BellSouth an additional opportunity for a favorable result only in instances where BellSouth is failing. In the cases where sample size is adjusted, the resulting estimate of service order accuracy will be biased.

### **Impact:**

This method has the potential for producing biased samples for calculating the "Provisioning: Service Order Accuracy" SQM, the reported values would not accurately reflect the quality of service provided.

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<sup>1</sup> KPMG Consulting used the June 1, 2001, version 3.00 of the *Florida Interim Performance Metrics* document as a basis to perform this test. The Business Rules listed in this Observation are listed in the *Florida Interim Performance Metrics* document published in June 2001.

<sup>2</sup> The bias is always in favor of BellSouth, unless the error rate exceeds 50%. On conference calls between BellSouth and KPMG Consulting held during the week of February 11, 2002, BellSouth stated that the error rate was never that high.



## **EXHIBIT 2**

# FLORIDA OSS BELL SOUTH'S RESPONSE TO OBSERVATION 178



Florida OSS Test  
Observation 178

April 3, 2002

## OBSERVATION REPORT

An observation has been identified as a result of the Metrics Definitions and Standards Development and Documentation Verification and Validation Review. (PMR2)

### Observation:

**KPMG Consulting has found that BellSouth's method of sampling records used for the calculation of the "Provisioning: Service Order Accuracy" Service Quality Measurement (SQM) may produce biased estimates.**

### Background:

As part of the BellSouth-Florida OSS Evaluation, KPMG Consulting has reviewed the *Florida Interim Performance Metrics* document.<sup>1</sup> KPMG Consulting evaluates the accuracy, completeness, and consistency of each metric's stated definition, calculation and business rules.

### Issue :

BellSouth adjusts the sample size when the results have higher variance than allowed by the benchmark standards, as stated by the SQM definition. Since the variance increases with the BellSouth error rate, this results in the selection and evaluation of more service orders only when BellSouth is doing poorly.<sup>2</sup> In effect, this procedure gives BellSouth an additional opportunity for a favorable result only in instances where BellSouth is failing. In the cases where sample size is adjusted, the resulting estimate of service order accuracy will be biased.

### Impact:

This method has the potential for producing biased samples for calculating the "Provisioning: Service Order Accuracy" SQM, the reported values would not accurately reflect the quality of service provided.

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## **FLORIDA OSS BELL SOUTH'S RESPONSE TO OBSERVATION 178**

### **BellSouth Response:**

Future sample sizes are increased when error rates increase solely to insure that the objective confidence interval of  $\pm 5\%$  is maintained. Since the likelihood of overstating or understating the actual error rate in the universe is not a function of the sample size, no bias is introduced. In fact, the larger sample sizes for universes with larger error rates reduce bias by giving a greater degree of certainty for the measure. If additional sampling of the current month is undertaken, it offers no advantage to BellSouth other than to increase the certainty of the measure.

Since the SOA measure is done by product type, each universe stands alone. The overall error rate is calculated as an additional indicator of accuracy, even though it is not part of the measurement plan. Since the overall error rate is calculated as a weighted average, the number of SOs sampled for each universe is not a factor.